

U.S. Appln. Serial No.: 09/752,564
Attorney Docket No.: 032405 WN 061

IN THE SPECIFICATION:

Please amend the specification as shown in the attached AMENDMENTS TO THE SPECIFICATION.

IN THE CLAIMS:

Please amend claims 1, 3, 4, and 7 as shown in the attached LISTING OF CLAIMS.

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LISTING OF CLAIMS

Claim 1 (currently amended): A rear gate opening and closing apparatus for automatically opening and closing a rear gate of a vehicle, comprising:

a power source unit that produces power to actuate said rear gate;

a slider that transforms said power into a reciprocating motion and for traveling in the longitudinal direction of said vehicle;

a hinge arm provided for attachment at an upper end of said rear gate so that said rear gate is pivotally connected with a body of said vehicle body;

a connecting rod that interlocks said slider and said hinge arm, said rod transmitting said reciprocating motion to said hinge arm;

a mounting base that supports said power source unit and said slider;

a mounting base installer for detachably installing said mounting base in a space formed by a rear rail, a side rail and an under roof of said vehicle; and

a gas stay, rotatably attachable to said side rail at one end thereof and attached to said hinge arm at the other end thereof, and disposed at substantially the same height as and approximately in parallel with said connecting rod and extending in the longitudinal direction of the vehicle throughout movement of said hinge arm for biasing said rear gate in an opening direction.

Claim 2 (previously amended): The apparatus according to claim 1, wherein

said mounting base is partly installable on a brace extending in the transverse direction of said vehicle.

Claim 3 (currently amended): The apparatus according to claim 1, further comprising:

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a clutch for disconnecting said power source unit with said slider so as to enable an operator to open or close said rear gate by hand.

Claim 4 (currently amended): The apparatus according to claim 1, further comprising a position detector for detecting a position of said rear gate and for outputting a detection signal thereof;

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a manipulator for operating an opening and closing motion of said rear gate; and a controller for controlling said power source unit for actuating said rear gate so as to automatically open and close said rear gate based on an operating the detection signal from said position detector.

Claim 5 (previously amended): The apparatus according to claim 4, wherein
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said controller controls said power source for actuating said rear gate so as to ~~to detect~~
control an opening and closing speed of said rear gate based on an operating signal from said position detector.

Claim 6 (currently amended): The apparatus according to claim 4, wherein
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said controller controls said power source for actuating said rear gate so as to vary an opening speed of the rear gate so that the rotation in an opening direction is assisted when said rear gate is in a self closing zone and the rotation in an opening direction is restricted when said rear gate is in a self opening zone.

Claim 7 (previously amended): The apparatus according to claim 4, wherein
said controller controls said power source unit for actuating said rear gate so as to vary a closing speed so that the rear gate is rotated in a closing direction against a biasing

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force of said gas stay when said rear gate is in a self-opening zone and the rotation of said rear gate in a closing direction is restricted when said rear gate is in a self-closing zone.

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Claim 8 (previously amended): The apparatus according to claim 4, wherein
said controller judges, based on said detection signal from said position detector, a
fully opened condition of said rear gate when said rear gate performing an opening
operation is arrived at a predetermined position.

Claim 9 (previously amended): The apparatus according to claim 4, wherein
said controller judges, based on a load of said power source unit, a fully opened or
closed condition of said rear gate.

Claim 10 (original): The apparatus according to claim 4, wherein
said apparatus has a warning means for raising an alarm during the opening and
closing operation of said rear gate.

Claim 11 (previously amended): The apparatus according to claim 4, wherein
said controller judges whether or not an opening and closing operation of said rear
gate is performed automatically based on a speed of said rear gate at which said rear gate
is manually operated, when the speed of said rear gate, at which said rear gate is manually
operated, is within a specified speed range, said controller judges that the opening and
closing operation is performed automatically.

Claim 12 (previously amended): The apparatus according to claim 4, wherein

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said apparatus has a handle switch for manually opening and closing said rear gate and said controller stops an automatic operation of said rear gate based on a detection signal of said handle switch and disengages ~~said~~ clutch.

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Claim 13 (original): The apparatus according to claim 4, wherein

said apparatus has a latch switch for detecting a fully closed condition of said rear gate and for outputting a detection signal and said control means initializes said position of said rear gate.

Claims 14-16 (withdrawn)

Claim 17 (previously added): The apparatus according to claim 4, wherein said controller judges based on said detection signal from said position detector a fully closed condition of said rear gate when said rear gate performing a closing operation is arrived at a predetermined position.
